

Marine ASV Range Surveillance System, Phase I

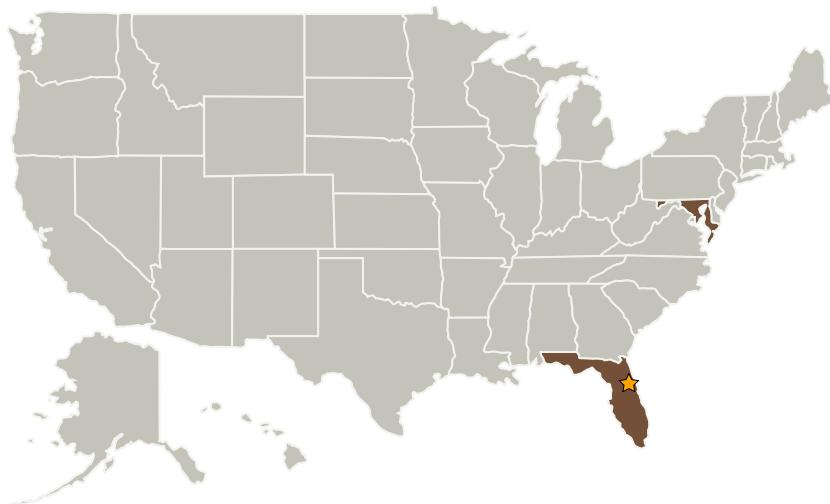
Completed Technology Project (2009 - 2009)



Project Introduction

United States spaceports carry out the impressive task of launching and recovering spacecrafts and payloads which represent extremely unique and expensive assets. The successful deployment, recovery, and operation of these assets are essential to our scientific discovery, economic prosperity, and national security. Range surveillance is a significant factor in enabling safe, reliable, and cost effective operations. Our ranges encompass large ocean regions that are not under the exclusive control of the spaceport. As such, these areas must be cleared in preparation for launch and reentry operations to ensure overall safety to the public as well as the space transportation system itself. Emergent Space Technologies, Inc. (Emergent) proposes to research a integrated marine autonomous surface vehicle (ASV) range surveillance (MARS) system to enhance spaceport situational awareness. The surveillance payload includes an array of optical, infrared, and RF sensors and onboard software to facilitate measurement infusion and analysis. The surveillance payload provides state estimates including position, velocity, and heading for marine assets. State measurements are relayed to the range control personnel to aid in operational decision making. The MARS system is intended to increase range availability and safety while decreasing operational costs.

Primary U.S. Work Locations and Key Partners



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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Kennedy Space Center (KSC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Organizations Performing Work	Role	Type	Location
★ Kennedy Space Center(KSC)	Lead Organization	NASA Center	Kennedy Space Center, Florida
Emergent Space Technologies, Inc.	Supporting Organization	Industry	Greenbelt, Maryland

Primary U.S. Work Locations

Florida	Maryland
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Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX16 Air Traffic Management and Range Tracking Systems
 - └ TX16.5 Range Tracking, Surveillance, and Flight Safety Technologies